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CENTRAL REFERENCE ADVISORY GROUP

Terms of Reference for a Study of Possible EDPM Applications in the DD/I Area

1. Purpose. The purpose of these terms of reference is to provide guidance in the conduct of studies for judging what advantages, if any, would result from the use of electronic data processing machines (EDPM) for particular operations in the DD/I area.

2. Background. The application of EDPM and related techniques is very costly and demands considerable preliminary planning. This is only a first step designed to establish general requirements. Later phases include a feasibility study, applications study, pre-installation programming, personnel selection and training, site preparation, equipment installation, systems conversion, and final staffing. Whether or not a detailed feasibility study is made before a computer application is approved, the equivalent of such a study must ultimately be made. The current study should in any case be in sufficient detail to ascertain the need for computer services in the DD/I area.

3. Identification of Areas to be Studied. In a general way responsible officials in the DD/I area have developed a tentative awareness of possible EDPM applications. Knowledge of the nature of our problems and of the present use of mechanical-electrical machines have led to an appreciation of the advantages which EDPM can provide in solving data

processing problems. This awareness is essential. The important next step is the selection of specific areas to be studied for potential application.

4. Purpose of Application. In identifying areas of possible EDPM application, the benefits to be sought should be firmly in mind:

(a) Greater accuracy and more timely data.

(b) Greater relatability among data.

(c) Potential for expansion.

(d) Needed data not available before.

(e) Economy (of time, manpower, space or money).

A real need for all or some of the above should be demonstrable in any particular application. It is usually not enough to want a computer because it can do things faster.

5. General Criteria for Selection of Areas for Study. Eventually, total annual costs under present operating conditions will have to be compared with estimated annual costs under a system employing a computer complex. We therefore want to identify areas where mechanization may be helpful, and not be out of the question cost-wise. You should look for the following:

(a) Operations which are already mechanized in part.

(b) Large volumes of repetitive clerical operations.

(c) Frequent reference to master files in different locations many of which contain duplicate information.

(d) Receipt of information on a continuing bases which requires updating, especially when performed at

different locations.

(e) Assembly and reduction of data from various sources for summarization, comparison, or evaluation.

(f) Desirability of performing an operation not now performed because of excessive time or cost.

(g) Need for immediate access to documents frequently or for providing answers from large files.

6. **Indicated Functional Areas of Interest.** The considerations outlined above point to several areas which should be investigated.

- Mechanical translation

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- Radio stations frequency data

- Document dissemination

- Document indexing

- Name indexing

- Early warning indicators

- Document abstracting

- Economic matrix analysis

- Processing biographic, industrial and graphic records

- Correlation of fragmentary information on selected targets (e.g. guided missile installations)

7. **Procedural Approach.** Basic to this study of the areas selected is a clear description of:

- What information you have to start with; and,

- What result must be achieved.

Statistics will be needed on forms and quantities of information, the

changes made in it, rates at which changes are made, processing deadlines,

time spent in preparation of inputs to existing systems, time spent to produce outputs, and the like. In short, findings will need supporting evidence, and evidence can only be acquired by the collection and analysis of data relevant to the problem at hand.

8. Suggested Outline for Data Collection.

- Organizational component

- Functional area studied

- Statement of desired result

- Description of present operation

     o Source of data coming in

     o Form of data coming in

     o Volume involved

     o Processing of data

     o Form of data going out

     o Disposal of data going out

     o Manpower and equipment involved